

PI Masure SLJ, Richardson A;
XX
XX MPI: 2000-498840/44.
DR P-PSDB: AAB13393.
XX
XX New human serine/threonine kinase protein and the polynucleotide
PT encoding the protein, useful for preparing a medicament for treating
PT disorders associated with human serine/threonine kinase protein
PT activity, especially cancer
XX
XX
XX Claim 3, Fig 1: 61pp: English.
PS
CC The present sequence encodes human Akt-3. Akt-3 is a third human isoform
CC of Akt, which is also known as protein kinase B (PKB) or "related to A
CC and C protein kinase" (RAC-PK). The gene encoding Akt-3 is located on
CC human chromosome 1, region q43-q44. A human hippocampal EST sequence that
CC showed high similarity to the rat RAC-PKgamma sequence was used to design
CC primers for 3' rapid amplification of cDNA ends (3' RACE). The sequence
CC obtained in the first round of 3' RACE was used to design primers for a
CC second round. The complete sequence was then amplified from human
CC hippocampal cDNA by PCR using primers based on the product of the second
CC round of 3' RACE. Akt can inhibit apoptosis induced by detachment from
CC the extracellular matrix. The Akt-3 nucleic acid molecule and protein may
CC be used as medicaments for treating cancer. Agents which influence the
CC activity of Akt-3 protein, and so stimulate apoptosis, may also be used
CC to treat diseases associated with Akt-3.
XX
SQ Sequence 1547 BP; 515 A; 276 C; 348 G; 408 T; 0 other:

Query Match 100.0%; Score 1547; DB 21; Length 1547;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1547; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 gggagtcacatcagcagcgtgtacccatgttgaaagaagttgggtccagaagaaggagaga 60
DB 1 gggagtcacatcagcagcgtgtacccatgttgaaagaagttgggtccagaagaaggagaga 60
QY 61 atatatataaaactcgtgagccagaatactcttcttgaaagacagatggtcattacaag 120
DB 61 atatatataaaactcgtgagccagaatactcttcttgaaagacagatggtcattacaag 120
QY 121 atataaagaagaacctcaagatgtgtattacctaaccctcaacaactttcagtgc 180
DB 121 atataaagaagaacctcaagatgtgtattacctaaccctcaacaactttcagtgc 180
QY 181 aaaaatgcagcttaataaacaagaagaccagaacccaacatctatatacagatgct 240
DB 181 aaaaatgcagcttaataaacaagaagaccagaacccaacatctatatacagatgct 240
QY 241 ccagtcgactactgttatagagaacatttcagttagaactccagaagaaggagaga 300
DB 241 ccagtcgactactgttatagagaacatttcagttagaactccagaagaaggagaga 300
QY 301 atggacagaagctatccagctgttagcagacagactcagagggcagaagaaggagaat 360
DB 301 atggacagaagctatccagctgttagcagacagactcagagggcagaagaaggagaat 360
QY 361 gaattgttaagccaacttccaatttgatataatagagaggaagaatgtgacccctac 420
DB 361 gaattgttaagccaacttccaatttgatataatagagaggaagaatgtgacccctac 420
QY 421 aaccacatcaaaagaagaacaatgataatttgactattgaaactactaagtaag 480
DB 421 aaccacatcaaaagaagaacaatgataatttgactattgaaactactaagtaag 480
QY 481 caactttgggaagtattttgttcgagagaagcgaatgggaaatactatgtctaa 540
DB 481 caactttgggaagtattttgttcgagagaagcgaatgggaaatactatgtctaa 540
QY 541 gatttcgaaagaagaagtcattatgtcagaagaatgagcagacacttaactgaag 600
DB 541 gatttcgaaagaagaagtcattatgtcagaagaatgagcagacacttaactgaag 600

QY 601 cagagatataaagaagaacatcagacatcccttttaacatccttgaatatctcctccagac 660
DB 601 cagagatataaagaagaacatcagacatcccttttaacatccttgaatatctcctccagac 660
QY 661 aaaaagccgtttgtgtttgtatgataatgttaatggggcgaactgttttccatt 720
DB 661 aaaaagccgtttgtgtttgtatgataatgttaatggggcgaactgttttccatt 720
QY 721 gtccagaagcggtgttctcttgagaccgcagacagttctatgtgtcagaatgtgtc 780
DB 721 gtccagaagcggtgttctcttgagaccgcagacagttctatgtgtcagaatgtgtc 780
QY 781 tgccttgagactatcattccggaagaatgtgtacccgtgacatcgaatgtgagaact 840
DB 781 tgccttgagactatcattccggaagaatgtgtacccgtgacatcgaatgtgagaact 840
QY 841 aatgctcgacaagaatgagccacataaaatcacagatcttgacttgcagaagaagat 900
DB 841 aatgctcgacaagaatgagccacataaaatcacagatcttgacttgcagaagaagat 900
QY 901 cacaagtcagccacacatgaagacatctgtgtgacctccagaatatctgcacagaagt 960
DB 901 cacaagtcagccacacatgaagacatctgtgtgacctccagaatatctgcacagaagt 960
QY 961 gttagaagaatagactatgagccagcagtagactgtgtggccttaggggtgtcagta 1020
DB 961 gttagaagaatagactatgagccagcagtagactgtgtggccttaggggtgtcagta 1020
QY 1021 tgaatgaatgtgtgagaggttaaccttccacacacagcagacatgagaacatttgaat 1080
DB 1021 tgaatgaatgtgtgagaggttaaccttccacacacagcagacatgagaacatttgaat 1080
QY 1081 aatatataggaagacatataatttctcgaacactctctcagatgcaaatcatgtgt 1140
DB 1081 aatatataggaagacatataatttctcgaacactctctcagatgcaaatcatgtgt 1140
QY 1141 ttcagggccttgatataaagatccaataaaacgcctgtgtgagagccagatgataa 1200
DB 1141 ttcagggccttgatataaagatccaataaaacgcctgtgtgagagccagatgataa 1200
QY 1201 agaaatlatgagacacagtttctctctgagatgaactgycgaagatgatatataa 1260
DB 1201 agaaatlatgagacacagtttctctctgagatgaactgycgaagatgatatataa 1260
QY 1261 gcttgaactccttttaaacctcaagtaacatctgagagaagatagatatatttga 1320
DB 1261 gcttgaactccttttaaacctcaagtaacatctgagagaagatagatatatttga 1320
QY 1321 agaatltacagctcagacatltacaataacacacacttgaaaaatagatgagatgt 1380
DB 1321 agaatltacagctcagacatltacaataacacacacttgaaaaatagatgagatgt 1380
QY 1381 ggaactgatgacaatlgagaagcgcgacatctccctcaatttctactctgcaagt 1440
DB 1381 ggaactgatgacaatlgagaagcgcgacatctccctcaatttctactctgcaagt 1440
QY 1441 acgaagataagtccttctatctgtacttcaacttcaatctcaatttactga 1500
DB 1441 acgaagataagtccttctatctgtacttcaacttcaatctcaatttactga 1500
QY 1501 tgattcctgacatcacacagctcagacttcaacatacagagggca 1547
DB 1501 tgattcctgacatcacacagctcagacttcaacatacagagggca 1547

RESULT 2
AAC77341
ID AAC77341 standard; cDNA: 3285 BP.
XX AAC77341;
AC
XX
DT 08-FEB-2001 (first entry)

XX Human ORFX ORF2896 polynucleotide sequence SEQ ID NO:5791.
 DE
 XX
 KW Human: open reading frame; ORFX; detection: cytostatic; hepatotropic;
 KW vulnery; antipariatic; antiparkinsonian; noctropic; neuroprotective;
 KW anticonvulsant; osteoplastic; antihypertensive; immunosuppressant; cardiant;
 KW immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
 KW hypotensive; dermatological; immunosuppressive; antineoplastic;
 KW antiviral; antibacterial; antifungal; antihemorrhagic; antithyroid;
 KW antianemic; gene therapy; cancer; proliferative disorder; hypertension;
 KW neurodegenerative disorder; osteoarthritis; graft vs host disease;
 KW cholesteroul ester storage; diabetes mellitus; hypothyroidism; SCID; AIDS;
 KW cholesterol ester storage; systemic lupus erythematosus; infection;
 KW severe combined immunodeficiency; malaria; autoimmune disorder; asthma;
 KW allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound;
 KW bone damage; cartilage damage; antineoplastic disease; coagulation;
 KW thrombosis; contraceptive; ss.
 XX
 OS Homo sapiens.
 XX
 PN MO200058473-A2.
 XX
 PD 05-OCT-2000.
 XX
 PF 31-MAR-2000; 2000WO-US08621.
 XX
 PR 31-MAR-1999; 99US-0127607.
 PR 02-APR-1999; 99US-0127636.
 PR 30-APR-1999; 99US-0127728.
 PR 30-MAR-2000; 2000US-0540763.
 XX
 PA (CURA-) CURAGEN CORP.
 XX
 FI Shinkets RA, Leach M:
 XX
 DR WPI: 2000-602362/57.
 DR P-PSDB: AAB43132.
 XX
 PT Novel nucleic acids and peptides derived from open reading frame X,
 PT useful for treating e.g. cancers, proliferative disorders,
 PT neurodegenerative disorders and cardiovascular disease -
 XX
 PS Claim 5; Page 4956-4958; 5507pp; English.
 XX
 CC AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397,
 CC which represent the human ORFX open reading frames 1 to 3161. The ORFX
 CC sequences have activities such as: cytostatic; hepatotropic; vulnery;
 CC antipariatic; antiparkinsonian; noctropic; neuroprotective;
 CC osteoplastic; anticonvulsant; antihypertensive; immunosuppressant;
 CC immunostimulant; cardiant; thrombolytic; coagulant; vasotropic;
 CC antidiabetic; hypotensive; dermatological; immunosuppressive;
 CC antineoplastic; antihypertensive; antihypertensive; antineoplastic;
 CC antithyroid; and antianemic. The sequences can be used for determining
 CC the presence of or predisposition to, or preventing or treating
 CC pathological conditions associated with an ORFX-associated disorder. The
 CC nucleic acids can be used to express ORFX proteins in gene therapy
 CC vectors. The proteins and nucleic acids may be used to treat cancers,
 CC proliferative disorders, neurodegenerative disorders, osteoarthritis,
 CC graft vs host disease, cardiovascular disease, diabetes mellitus,
 CC hypertension, hypothyroidism, cholesterol ester storage, systemic lupus
 CC erythematosus, severe combined immunodeficiency (SCID), AIDS, viral,
 CC bacterial or fungal infection, malaria, autoimmune disorders, asthma,
 CC allergies, aplastic anaemia, burns, wounds, bone and cartilage damage,
 CC nocturnal haemoglobinuria, antineoplastic disease; to enhance
 CC coagulation; to inhibit thrombosis; and as a contraceptive.
 CC
 XX
 SQ Sequence 3285 BP; 1028 A; 624 C; 690 G; 942 T; 1 other;

QY 1 ggaagtcacatgaagcgaatgtacatctgtgaagaaggttgggttcaggaaggggaga 60
 DB 465 gggagtcacatgaagcgaatgtacatctgtgaagaaggttgggttcaggaaggggaga 524
 QY 61 atataaaag 120
 DB 525 atataaaag 584
 QY 121 atataaaag 180
 DB 565 atataaaag 644
 QY 181 aaaaag 240
 DB 645 aaaaag 704
 QY 241 ccaagtgag 300
 DB 705 ccaagtgag 764
 QY 301 atgag 360
 DB 765 atgag 824
 QY 361 gaattgag 420
 DB 825 gaattgag 884
 QY 421 aaaaag 480
 DB 885 aaaaag 944
 QY 481 caatttgag 540
 DB 945 caatttgag 1004
 QY 541 gatttgag 600
 DB 1005 gatttgag 1064
 QY 601 cagagatgaag 660
 DB 1065 cagagatgaag 1124
 QY 661 aaaaag 720
 DB 1125 aaaaag 1184
 QY 721 gtcgag 780
 DB 1185 gtcgag 1244
 QY 781 gtcgag 840
 DB 1245 gtcgag 900
 QY 841 aatgctgag 900
 DB 1305 aatgctgag 1364
 QY 901 cagagatgaag 960
 DB 1365 cagagatgaag 1424
 QY 961 gtcgag 1020
 DB 1425 gtcgag 1484
 QY 1021 tgaatgag 1080
 DB 1485 tgaatgag 1544
 QY 1081 aatgctgag 1140

Query Match 99.9%; Score 1545.4; DB 21; Length 3285;
 Best Local Similarity 99.9%; Pred. No. 0;
 Matches 1546; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 1545 aatataatcgaagacatttaatttcctgaacacctcttcagatgcaaaatcattgct 1604
OY 1141 ttcagggtcttgataaagatccaaataaagccttggtgagggccagatgataa 1200
Db 1605 ttcagggtcttgataaagatccaaataaagccttggtgagggccagatgataa 1664
OY 1201 agaaatcagacacagcttctctctgagtaaacctggcaagatgatatataa 1260
Db 1665 agaaatcagacacagcttctctctgagtaaacctggcaagatgatatataa 1724
OY 1261 gcttgaacctctttaaaccctcaagtaaacatctgagacagatagatttga 1320
Db 1725 gcttgaacctctttaaaccctcaagtaaacatctgagacagatagatttga 1784
OY 1321 agaattacagctcagacattataacatacaccacctgaaaaatagatgagatgt 1380
Db 1785 agaattacagctcagacattataacatacaccacctgaaaaatagatgagatgt 1844
OY 1381 ggaactgacatggaacatgagagcgccgcatctccctcaatttccctactctgaagtg 1440
Db 1845 ggaactgacatggaacatgagagcgccgcatctccctcaatttccctactctgaagtg 1904
OY 1441 agagaataagctcttcttcttctctgacttcaactgacttcaatttactgataa 1500
Db 1905 agagaataagctcttcttcttctctgacttcaactgacttcaatttactgataa 1964
OY 1501 tgattcctgacatcacagctcctgacttcaacatacagagggca 1547
Db 1965 tgattcctgacatcacagctcctgacttcaacatacagagggca 2011

RESULT 3

AAC61592

ID AAC61592 standard; DNA; 2367 BP.

XX AC AAC61592;

DT 19-FEB-2001 (first entry)

DE DNA encoding a human kinase B-gamma polypeptide.

KM Human; protein kinase B gamma; PKB; insulin; insulin growth factor 1;
KM phosphoinositide 3-kinase; insulin signalling;
KM pleckstrin homology domain; ss.

OS Homo sapiens.

FH Key Location/Qualifiers

FT CDS 10..1449
FT /*tag= a
FT /product= "kinase B-gamma polypeptide"

PW WO200058446-A1.

XX 05-OCT-2000.

PD 23-MAR-2000; 2000WO-SE00571.

PF 25-MAR-1999; 99SE-0001115.

XX (PHAA) PHARMACIA & UPJOHN AB.

PA Attersand A;

DR WPI: 2000-647230/62.

XX P-PSDB; AAB19284.

Novel human protein kinase B gamma polynucleotides and polypeptides
PT useful as probe or primers in polymerase chain reaction and to raise
PT antibodies useful in diagnostic assays for detecting polypeptide
PT expression

PS Claim 1: Page 16-19; 27pp; English.

XX The present sequence encodes a human protein kinase B gamma (PKB)
CC polypeptide. PKB is activated by insulin or insulin growth factor 1.
CC Lipid products of phosphoinositide 3-kinase act in insulin signalling
CC by binding to pleckstrin homology domains of PKB. PKB polynucleotides
CC may be used as a source of probes and primers. PKB polypeptides are
CC used to raise antibodies, which are used in diagnostic assays. The
CC polypeptides are also useful for screening for compounds which affect
CC insulin signalling pathways.

SQ Sequence 2367 BP; 752 A; 444 C; 514 G; 657 T; 0 other;

Query Match 99.8%; Score 1544.4; DB 21; Length 2367;

Best Local Similarity 99.9%; Pred. No. 0;

Matches 1545; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 2 ggaatcatcatgagcgtttacacatttgaaagaaggttgggttcagaagaggagaga 61
Db 1 ggaatcatcatgagcgtttacacatttgaaagaaggttgggttcagaagaggagaga 60
OY 62 tatataaaaactgagagcccaagatacttcccttgaagacagatggtcattcaga 121
Db 61 tatataaaaactgagagcccaagatacttcccttgaagacagatggtcattcaga 120
OY 122 tataaagagaacccctaagatgtgattacattcccttaacacatttccagtga 181
Db 121 tataaagagaacccctaagatgtgattacattcccttaacacatttccagtga 180
OY 182 aaatgcagttatgaaaaacagaacgacccaacacacattataatcagatgtcc 241
Db 181 aaatgcagttatgaaaaacagaacgacccaacacacattataatcagatgtcc 240
OY 242 cagtgcagctacgttataagaagaacattctatgtatgatacccgagaaaggaga 301
Db 241 cagtgcagctacgttataagaagaacattctatgtatgatacccgagaaaggaga 300
OY 302 tgaacagaagctatccagcgttgacagacagactgcagagccagaagaaggagaatg 361
Db 301 tgaacagaagctatccagcgttgacagacagactgcagagccagaagaaggagaatg 360
OY 362 aattgtagtccaacttcaaaaaatgataatagagagaagaaatgtagtccctaca 421
Db 361 aattgtagtccaacttcaaaaaatgataatagagagaagaaatgtagtccctaca 420
OY 422 acccatcataaaagaagaacatgaaatgtgactattgaaactactgataaagc 481
Db 421 acccatcataaaagaagaacatgaaatgtgactattgaaactactgataaagc 480
OY 482 accttggagaagattatttggttcgaagaagaagtggaataactatgctatga 541
Db 481 accttggagaagattatttggttcgaagaagaagtggaataactatgctatga 540
OY 542 attctgaagaagaagctatattgcaaaagatgaagtgcacacacttaactgaagc 601
Db 541 attctgaagaagaagctatattgcaaaagatgaagtgcacacacttaactgaagc 600
OY 602 agagtataaagaacacatgacatcccttttaacatccctgaaatattcctccagaca 661
Db 601 agagtataaagaacacatgacatcccttttaacatccctgaaatattcctccagaca 660
OY 662 aaagacggttggttggtttgatgataatgttaatggggcggaactgtttccattg 721
Db 661 aaagacggttggttggtttgatgataatgttaatggggcggaactgtttccattg 720
OY 722 tcgaagagcggtgttctctgagagccgacaacgttctcatggtcgaaattgtctct 781
Db 721 tcgaagagcggtgttctctgagagccgacaacgttctcatggtcgaaattgtctct 780
OY 782 gcttgaactatcatatcccgaaagaattgtatcgttgatcctaagttggaagatcta 841
Db 781 gcttgaactatcatatcccgaaagaattgtatcgttgatcctaagttggaagatcta 840

```

OY 842 atgctggaacaagatgagccacataaaattacagattttgtgacttgcagaagaagatc 901
DB 841 atgctggaacaagatgagccacataaaattacagattttgtgacttgcagaagaagatc 900
OY 902 acagatgagccacacatgaacattctgtgacatccagatatctgcacacaagtg 961
DB 901 acagatgagccacacatgaacattctgtgacatccagatatctgcacacaagtg 960
OY 962 ttagaagaataatgactatgcccagacagtagactgtgtgggcttaggggtgtgtat 1021
DB 961 ttagaagaataatgactatgcccagacagtagactgtgtgggcttaggggtgtgtat 1020
OY 1022 gaatgatgtgtgtggaggttacccttctacacacagacatgaaacatttgaatta 1081
DB 1021 gaatgatgtgtgtggaggttacccttctacacacagacatgaaacatttgaatta 1080
OY 1082 atattaatggaagacattaaatttctcgaacactctctcagatgcaaaatcattgctt 1141
DB 1081 atattaatggaagacattaaatttctcgaacactctctcagatgcaaaatcattgctt 1140
OY 1142 tcagggtcttgatataaagatcccaataaagcgtcttggtggagacagatgatgcaaaa 1201
DB 1141 tcagggtcttgatataaagatcccaataaagcgtcttggtggagacagatgatgcaaaa 1200
OY 1202 gaattatgagacacagtttctctctgtgagtaactgtgcaagatgtatatgataaaag 1261
DB 1201 gaattatgagacacagtttctctctgtgagtaactgtgcaagatgtatatgataaaag 1260
OY 1262 ctcttaccctctttaaaccctcaagtaacatctgagacagatgactagatatgttgaata 1321
DB 1261 ctcttaccctctttaaaccctcaagtaacatctgagacagatgactagatatgttgaata 1320
OY 1322 gaattacagctcagactatttacaataacacacactgaaataatgatgagatgtatg 1381
DB 1321 gaattacagctcagactatttacaataacacacacactgaaataatgatgagatgtatg 1380
OY 1382 gactgcagatggaatggaagcgccgcatcttccctcaatttcttactctgtgcaagtga 1441
DB 1381 gactgcagatggaatggaagcgccgcatcttccctcaatttcttactctgtgcaagtga 1440
OY 1442 cgagataagctcttcttactctgtactcactgacatcttcaatttacttacttgaat 1501
DB 1441 cgagataagctcttcttactctgtactcactgacatcttcaatttacttacttgaat 1500
OY 1502 gattctggaacacacacagctccttacttacaacatgacaggggca 1547
DB 1501 gattctggaacacacacagctccttacttacaacatgacaggggca 1546

```

RESULT 4
AAA62451
ID AAA62451 standard; cDNA; 1440 BP.
XX
AC AAA62451;
XX
DT 13-NOV-2000 (first entry)
XX
DE Human Akt-3 coding sequence.
XX
KW Human: Akt-3; protein kinase B; PKB; serine/threonine kinase; cytosolic;
KW apoptosis stimulator; cancer; rapid amplification of cDNA ends; RACE;
KW chromosome 1q43-44; ss.
XX
XX Homo sapiens.
XX OS
XX FH Key 1. 1440
XX FT CDS /tag= a
XX FT /product= "Akt-3"
XX PN WO200037613-A2.

```

PD 29-JUN-2000.
XX
XX 17-DEC-1999; 99WO-G804311.
XX
PR 22-DEC-1998; 98GB-0028375.
XX
XX (JANC ) JANSSEN PHARM NV.
PI Measure SLJ, Richardson A;
XX
XX WPI; 2000-498840/44.
DR P-PSDB; AAB13393.
XX
XX New human serine/threonine kinase protein and the polynucleotide
XX encoding the protein, useful for preparing a medicament for treating
XX disorders associated with human serine/threonine kinase protein
XX activity, especially cancer
XX
XX Claim 4; Fig 1; 61pp: English.
XX
XX The present sequence is the coding region of the nucleotide sequence that
XX encodes human Akt-3. Akt-3 is a third human isoform of Akt, which is also
XX known as protein kinase B (PKB) or "related to A and C protein kinase"
XX (RAC-PK). The gene encoding Akt-3 is located on human chromosome 1,
XX region q43-q44. A human hippocampal EST sequence that showed high
XX similarity to the rat RAC-PKgamma sequence was used to design primers for
XX 3' rapid amplification of cDNA ends (3' RACE). The sequence obtained in
XX the first round of 3' RACE was used to design primers for a second round.
XX The complete sequence was then amplified from human hippocampal cDNA by
XX PCR using primers based on the product of the second round of 3' RACE.
XX Akt can inhibit apoptosis induced by detachment from the extracellular
XX matrix. The Akt-3 nucleic acid molecule and protein may be used as
XX medicaments for treating cancer. Agents which influence the activity of
XX Akt-3 protein, and so stimulate apoptosis, may also be used to treat
XX diseases associated with Akt-3.
XX
XX Sequence 1440 BP; 489 A; 248 C; 330 G; 373 T; 0 other:
XX
XX
XX Query Match 93.1%; Score 1440; DB 21; Length 1440;
XX Best Local Similarity 100.0%; Pred. No. 0;
XX Matches 1440; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
OY 11 atgagcgatgtaccattgtgaagaaggttgggttcagaagaggagggaataataaa 70
DB 1 atgagcgatgtaccattgtgaagaaggttgggttcagaagaggagggaataataaa 60
OY 71 aactggaagccaaagtactcttcttgaagaagaatgtctcaatcatagatatagaag 130
DB 61 aactggaagccaaagtactcttcttgaagaagaatgtctcaatcatagatatagaag 120
OY 131 aaactcaagatgttgatcttaacctatccctcaacaacttccagtgcgaatgccaag 190
DB 121 aaactcaagatgttgatcttaacctatccctcaacaacttccagtgcgaatgccaag 180
OY 191 ttaatgaaacagaaagccaaagccaaacacattataatcaatgagtgtccagtgcact 250
DB 181 ttaatgaaacagaaagccaaagccaaacacattataatcaatgagtgtccagtgcact 240
OY 251 actgttataagagaacatttcatatgtatgatactccagaaggaaagggaatggaacaaa 310
DB 241 actgttataagagaacatttcatatgtatgatactccagaaggaaagggaatggaacaaa 300
OY 311 gctatccaggtctgtagcagacagactgcagaggaaggaaggaaggaatgtaattgagt 370
DB 301 gctatccaggtctgtagcagacagactgcagaggaaggaaggaaggaatgtaattgagt 360
OY 371 ccaacttcaacaattgataataatagagaagagaagatgagatgctctacaacccaatcat 430
DB 361 ccaacttcaacaattgataataatagagaagagaagatgagatgctctacaacccaatcat 420
OY 431 aaagaagaagaatgataattgataattgaaactacagtaggaaggaacatttgagg 490

```

Db 421 aaaaagaagcaatgaatgttgaactatgttaaacctagtaagcatttggg 480
 QY 491 aaagtatttggctcgagagaagcaagtgtgaaatactatactatgaagcttgaag 550
 Db 481 aaagtatttggctcgagagaagcaagtgtgaaatactatactatgaagcttgaag 540
 QY 551 aaagaatcattatgtcaaaagatgaagtgagcacacacttaactgaagcagatatta 610
 Db 541 aaagaatcattatgtcaaaagatgaagtgagcacacacttaactgaagcagatatta 600
 QY 611 aaagaatcattatgtcaaaagatgaagtgagcacacacttaactgaagcagatatta 670
 Db 601 aaagaatcattatgtcaaaagatgaagtgagcacacacttaactgaagcagatatta 660
 QY 671 ttgtgttctgtgaggaatgttaattggggcgagactgtttccattgtcgaagag 730
 Db 661 ttgtgttctgtgaggaatgttaattggggcgagactgtttccattgtcgaagag 720
 QY 731 cgggtgtctctgaggaacgcgcacacgcttctatgtgcagaaatgtctctgcctggac 790
 Db 721 cgggtgtctctgaggaacgcgcacacgcttctatgtgcagaaatgtctctgcctggac 780
 QY 791 tatctacattcggaaagttgtgtacgtgtatcctaagttgagaatcttaagtcggac 850
 Db 781 tatctacattcggaaagttgtgtacgtgtatcctaagttgagaatcttaagtcggac 840
 QY 851 aaagatgcccacataaaatatacagatttgcagcttgcacaaagaggtacacagatga 910
 Db 841 aaagatgcccacataaaatatacagatttgcagcttgcacaaagaggtacacagatga 900
 QY 911 gccacatgaagaacattctgtgcactcagaatatactgagcaccagaagtgatagaagat 970
 Db 901 gccacatgaagaacattctgtgcactcagaatatactgagcaccagaagtgatagaagat 960
 QY 971 aatgactatggcggagcaatagactgtgtggcgctaggggtgtctatgtatgaagatg 1030
 Db 961 aatgactatggcggagcaatagactgtgtggcgctaggggtgtctatgtatgaagatg 1020
 QY 1031 tctggaaggttaaccttctacaaacagagacatgaagaacttttaataatataatg 1090
 Db 1021 tctggaaggttaaccttctacaaacagagacatgaagaacttttaataatataatg 1080
 QY 1091 gaagacattaaattctctcgaacactcttccagatgcaaaatcattgtctcagggtc 1150
 Db 1081 gaagacattaaattctctcgaacactcttccagatgcaaaatcattgtctcagggtc 1140
 QY 1151 ttgataaaggaatccaaataaagccttggtagagaccagatgatacaagaatattg 1210
 Db 1141 ttgataaaggaatccaaataaagccttggtagagaccagatgatacaagaatattg 1200
 QY 1211 agacacagttcttctctgtagtaaacctgcaagatgtatataaagaagcttgaact 1270
 Db 1201 agacacagttcttctctgtagtaaacctgcaagatgtatataaagaagcttgaact 1260
 QY 1271 cctttaaaccctcaagtaaacatctgagacagatactagattttgtagaagaatttaca 1330
 Db 1261 cctttaaaccctcaagtaaacatctgagacagatactagattttgtagaagaatttaca 1320
 QY 1331 gctcagactatatacaataacacacacttgataatataatgagatgtgtatgtagctcatg 1390
 Db 1321 gctcagactatatacaataacacacacttgataatataatgagatgtgtatgtagctcatg 1380
 QY 1391 gacaatgagagcgcgagcatttccctcaatttccctactcgcgaagtgaagagataa 1450
 Db 1381 gacaatgagagcgcgagcatttccctcaatttccctactcgcgaagtgaagagataa 1440

DT 08-FEB-2001 (first entry)
 XX DNA encoding a human Akt3 polypeptide.
 DE Human; Akt3; apoptotic cell death; apoptotic stimulating kinase 1; ASK1;
 KW hypoxia; apoptosis; necrosis; myocardial infarction; ischemia;
 KW reperfusion injury; myocardial ischemia reperfusion injury; stroke;
 KW liver damage; renal failure; organ transplantation; coronary artery; ss.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT CDS 126..1523
 FT /tag= "a
 FT /product= "Akt3"
 PN WO200056866-A2.
 XX
 PD 28-SEP-2000.
 XX
 PF 14-MAR-2000; 2000WO-US06574.
 XX
 PR 19-MAR-1999; 99US-0125108.
 XX
 PA (AVENTIS PHARM PROD INC.
 XX
 PI Guo K, Pagnoni MF, Clark KL, Ivashchenko YD;
 DR WPI: 2000-638260/61.
 DR P-PSDB: AAB19011.
 XX
 PT Novel AKT3 nucleic acid and proteins capable of preventing apoptotic
 PT cell death induced by apoptosis stimulating kinase 1 useful for
 PT treating myocardial infarction or ischemia reperfusion injury -
 XX
 XX Claim 3; Page 62-64; 73pp; English.
 PS
 CC The present sequence encodes a human Akt3 protein. Expression of Akt3
 CC prevents apoptotic cell death induced by apoptotic stimulating kinase 1
 CC (ASK1). The Akt3 polypeptide is useful for inhibiting cell death,
 CC preferably in a cardiac myocyte, resulting from hypoxia, apoptosis or
 CC necrosis in a patient suffering from myocardial infarction or ischemia
 CC reperfusion injury. The polypeptide is also useful for treating
 CC myocardial infarction or ischemia reperfusion injury, where the
 CC reperfusion injury is myocardial ischemia reperfusion injury or is
 CC associated with stroke, liver damage, renal failure, organ
 CC transplantation or coronary artery by pass grafting.
 CC
 XX Sequence 1570 BP; 553 A; 267 C; 358 G; 392 T; 0 other:
 SQ
 Query Match 88.2%; Score 1364.8; DB 21; Length 1570;
 Best Local Similarity 98.4%; Pred. No. 0;
 Matches 1378; Conservative 0; Mismatches 22; Indels 0; Gaps 0;
 QY 1 gggagtcacatcagagcagatgttaccattgtgaaagaaggtgtgtcacaagaaggagga 60
 Db 116 gggagtcacatcagagcagatgttaccattgtgaaagaaggtgtgtcacaagaaggagga 175
 QY 61 atataaanaaaactgagagccaaagatctcttctgaaagacatgagtcatacaga 120
 Db 176 atataaanaaaactgagagccaaagatctcttctgaaagacatgagtcatacaga 235
 QY 121 atataaagaacacccaagatgtgatttaccattatcccccaacaacttttcagtgac 180
 Db 236 atataaagaacacccaagatgtgatttaccattatcccccaacaacttttcagtgac 295
 QY 181 aaaaatgcagtttaataaagacagacgaacgaacgaacacacattatatacagatgtct 240
 Db 296 aaaaatgcagtttaataaagacagacgaacgaacgaacacacattatatacagatgtct 355
 QY 241 ccagtgactactgttatagagaacatttcatgtatagactccagaggaaggagga 300

RESULT 5
 AAA96637
 ID AAA96637 standard; DNA; 1570 BP.
 AC
 XX AAA96637;
 XX

Query Match 88.2%: Score 1364.8: DB 22: Length 1570;
 Best Local Similarity 98.4%: Pred. No. 0:
 Matches 1378: Conservative 0: Mismatches 22: Indels 0: Gaps 0:

QY 1 gggagtcacatcgtgagcgtgttaccatctgtgaaagaaggttgggttcagaagaaggagga 60
 |||||
 Db 116 gggagtcacatcgtgagcgtgttaccatctgtgaaagaaggttgggttcagaagaaggagga 175
 QY 61 atatatataaaacttgagggccaagatactctcttcttgagacagatgggtccatctatag 120
 |||||
 Db 176 atataataaaacttgagggccaagatactctcttcttgagacagatgggtccatctatag 225
 QY 121 atataagaagaaccccaagatctgtgatttacccttaccctcaacaacttccatctgag 180
 |||||
 Db 236 atataagaagaaccccaagatctgtgatttacccttaccctcaacaacttccatctgag 295
 QY 181 aaaaatgcaggttaataaagaacagaacccaagccaacacattataatcagatgtct 240
 |||||
 Db 296 aaaaatgcaggttaataaagaacagaacccaagccaacacattataatcagatgtct 355
 QY 241 ccagtgactactgttatagagaagaacattctatgtatgataccccaagagaaggaga 300
 |||||
 Db 356 ccagtgactactgttatagagaagaacattctatgtatgataccccaagagaaggaga 415
 QY 301 atgacagaagaagctacagagctgtagacagacagctgcagaggcaagaaagagaagaat 360
 |||||
 Db 416 atgacagaagaagctacagagctgtagacagacagctgcagaggcaagaaagagaagaat 475
 QY 361 gaattgtatgccacttcaacaaatgtataatagagaagaagagatgtatgcctctac 420
 |||||
 Db 476 gaattgtatgccacttcaacaaatgtataatagagaagaagagatgtatgcctctac 535
 QY 421 aaccatcatataaagaagaacaaatgtatgtactatttgaactactatagtaagg 480
 |||||
 Db 536 aaccatcatataaagaagaacaaatgtatgtactatttgaactactatagtaagg 595
 QY 481 caattctggaaagttatttgggttcgagagaagcgaagtggaaataactatctatgaa 540
 |||||
 Db 596 caattctggaaagttatttgggttcgagagaagcgaagtggaaataactatctatgaa 655
 QY 541 gattctgaagaagaagtcattatctgcaaaagaatgaagtgcacacacttaactgaag 600
 |||||
 Db 656 gattctgaagaagaagtcattatctgcaaaagaatgaagtgcacacacttaactgaag 715
 QY 601 cagaagattaaagaacacacagacatcccttttaacatcccttgaatatctccacagac 660
 |||||
 Db 716 cagaagattaaagaacacacagacatcccttttaacatcccttgaatatctccacagac 775
 QY 661 aaaaagacgcttctgttcttctgtaataatgttaaagggcgagctgttcttcatt 720
 |||||
 Db 776 aaaaagacgcttctgttcttctgtaataatgttaaagggcgagctgttcttcatt 835
 QY 721 gtcgagaagcggtgttctctctgagacccgacacagcttctatgtgtcagaatctgtctc 780
 |||||
 Db 836 gtcgagaagcggtgttctctctgagacccgacacagcttctatgtgtcagaatctgtctc 895
 QY 781 tgccttgagctatcatctacccgaaagaatgtgtacccggtatcctaagtctgaagatct 840
 |||||
 Db 896 tgccttgagctatcatctacccgaaagaatgtgtacccggtatcctaagtctgaagatct 955
 QY 841 aatgctgacaagaatgagccacataaaattacagatttggacttgcacaagaaggat 900
 |||||
 Db 956 aatgctgacaagaatgagccacataaaattacagatttggacttgcacaagaaggat 1015
 QY 901 cacagatgcagccacatggaagacattctgtgacactccagaatatctggcaccagagt 960
 |||||
 Db 1016 cacagatgcagccacatggaagacattctgtgacactccagaatatctggcaccagagt 1075
 QY 961 gttagaagataatgactatgagccgagcagatgagactgtggggtctagggttctatgta 1020
 |||||
 Db 1076 gttagaagataatgactatgagccgagcagatgagactgtggggtctagggttctatgta 1135

QY 1021 tgaatgatctgtggaggttacccttctacaaaccagacacatgagaanaacttctgaa 1080
 |||||
 Db 1136 tgaatgatctgtggaggttacccttctacaaaccagacacatgagaanaacttctgaa 1195
 QY 1081 aatatcaatggaagacattaaattctctggaacacccctcttcagatgcaaatcatgtct 1140
 |||||
 Db 1196 aatatcaatggaagacattaaattctctggaacacccctcttcagatgcaaatcatgtct 1255
 QY 1141 ttcagggtctctgtataaagaatccaaataaagccttgggtggaggaaccagatgtgcaa 1200
 |||||
 Db 1256 ttcagggtctctgtataaagaatccaaataaagccttgggtggaggaaccagatgtgcaa 1315
 QY 1201 agaaattatgagacacagttctctctctgtgagtaaaacttggcagaatgtatataa 1260
 |||||
 Db 1316 agaaattatgagacacagttctctctctgtgagtaaaacttggcagaatgtatataa 1375
 QY 1261 gcttgtactctctttaaaccctgaagtaacatcttgagacagatagatatttga 1320
 |||||
 Db 1376 gcttgtactctctttaaaccctgaagtaacatcttgagacagatagatatttga 1435
 QY 1321 agaatattaaagctcacactattacaataacacacacttgaaaaatagatgagatgtat 1380
 |||||
 Db 1436 agaatattaaagctcacactattacaataacacacacttgaaaaatagatgagatgtat 1495
 QY 1381 agactgatgacacatgaga 1400
 |||||
 Db 1496 agactgatgagtaactgga 1515

RESULT 7
 AAA09078
 ID AAA09078 standard; DNA; 2626 bp.
 XX
 AC AAA09078;
 XX
 DT 10-AUG-2000 (first entry)
 XX
 DE Wild type murine Akt coding sequence.
 XX
 DE Akt: protein kinase B; serine-threonine kinase; proto-oncogene; cardiant;
 KW Inhibitor; apoptosis; cell death; antiapoptotic; muscular activator; ss.
 KW
 OS Mus musculus.
 XX
 FT Key Location/Qualifiers
 FT CDS 284..1726
 FT /tag= a
 FT /product= protein_kinase_B
 XX
 PN WO200020025-A2.
 PN
 PD 13-APR-2000..
 XX
 PF 29-SEP-1999; 99WO-US22633.
 PF
 XX 02-OCT-1998; 98US-0102740.
 PR
 XX (SELI-) ST ELIZABETH'S MEDICAL CENT INC.
 PA
 PI Walsh K;
 PI
 DR MPI: 2000-303639/26.
 DR P-PSDB: AAY92223.
 XX
 XX Treating myocardial infarction or conditions associated with increased
 PT apoptotic cell-death of vascular endothelial cells or skeletal
 PT myocytes comprises administering Akt (also termed Protein Kinase B
 PT (PKB) molecule
 XX
 PS Disclosure: Page 69; 71pp; English.
 XX
 CC The invention concerns methods of treating myocardial infarction, which
 CC comprise administering to a subject an Akt (Protein Kinase B) molecule


```
OY 956 gaggtgtagaagaataactatgacccgagcagtagactggtgggcttaggggttctc 1015
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 1153 gaggtgtagaagaataactatgacccgagcagtagactggtgggcttaggggttctc 1212
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 1016 atgataagaagaatggtggtgaggttaccttctcaacacccgagacatgagaattttc 1075
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 1213 atgataagaagaatggtggtgaggttaccttctcaacacccgagacatgagaattttc 1272
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 1076 gaataataatgaagaacatlaaatttctcgaacactctcttcagatgacaaatca 1135
    | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 1273 gactcattccatcagagagatccgctcccgagcagcgttgcctcgagccaaagtc 1332
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 1136 ttgtcttcagggctctgtatagaagatccaaataaagccttgggtgagacaaatgat 1195
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 1333 ttgtcttcagggctctgtatagaagatccaaataaagccttgggtgagacaaatgat 1392
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 1196 gcaaaagaatatagaagacagtttctctcgtgagtaactggcaagatgatatgat 1255
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 1393 gcaaaagaatatagaagacagtttctctcgtgagtaactggcaagatgatatgat 1452
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 1256 aaaaagcttgcactcctttaaactcaagtaaatctgagacagatagatatatt 1315
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 1453 aagaagctcagcccaacctcaagcagcagtcgagacagtcgacacagagatttt 1512
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 1316 gatgaagaatttaacagctcagactattacaataacacacactgaaataatgataagat 1375
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 1513 gatgaagaatttaacagctcagactattacaataacacacactgaaataatgataagat 1566
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 1376 ggtctgacatcagcagcaatgagagcgccgacatttcctcaatttctcactctcga 1435
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 1567 agcatggagtggtgtggaagagcgagcgcccaactcccccagttctctactcggcc 1626
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 1436 agtggacgagataaagtc 1453
    || | | | | | | | | |
DB 1627 agcagcagcgctgagcg 1644
    || | | | | | | | | |

RESULT 11
AAZ41177
ID AAZ41177 standard; cDNA; 2610 BP.
XX
AC AAZ41177;
XX
DT 26-JAN-2000 (first entry)
XX
DE Human AKT-1 encoding cDNA.
XX
KW Identification; genetic target; gene modulation; human; probe;
KW antisense oligonucleotide; phosphorothioate; PCR primer;
KW nucleotide sequence-based technology; antisense drug discovery;
KW target validation; ss.
XX
OS Homo sapiens.
XX
PN MO9953101-A1.
XX
PD 21-OCT-1999.
XX
PF 13-APR-1999; 99WO-US08268.
XX
PR 13-APR-1998; 98US-0081483.
XX
PR 28-APR-1998; 98US-0067638.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Cosvert LM, Baker BF, McNeill J, Freier SM, Sasamor HM, Brooks DG;
PI Ohasi C, Wyatt JR, Borchers AH, Vickers TA;
XX
DR WPI: 1999-620446/53.
DR P-PSDB: AAY52706.
XX
PT Identifying compounds which modulate expression of nucleic acids, used
```

```
PT to provide compounds having defined physical, chemical or bioactive
PT properties, e.g. antisense activity
XX
PS Example 29; Page 248-251; 264pp; English.
XX
A method has been developed of defining a set of compounds that modulate
the expression of a target nucleic acid (tNA) sequence via binding of
the compounds with the tNA sequence. The method comprises generating a
library of virtual compounds in silico according to defined criteria,
and evaluating in silico the binding of the virtual compounds with the
tNA according to defined criteria. Also described are: (1) a method of
defining a set of oligonucleotides (ONS) that modulate the expression of
a tNA sequence via binding of the ONS with the tNA sequence comprising
generating a library of virtual compounds in silico according to defined
criteria, and evaluating in silico the binding of the virtual ONS with
the tNA according to defined criteria; and (2) a method of defining a
set of compounds that modulate the expression of a tNA sequence via
binding of the compounds with the tNA. The methods can be used for the
generation and identification of synthetic compounds having defined
physical, chemical or bioactive properties. Information gathered from
assays of such compounds is used to identify nucleic acid sequences that
are tractable to a variety of nucleotide sequence-based technologies,
e.g. antisense drug discovery and target validation. AAZ40852 to
AAZ41220, and AAY52701 to AAY52706, represent sequences used in the
exemplification of the present invention.
XX
Sequence 2610 BP: 537 A; 752 C; 781 G; 540 T; 0 other;
S0
Query Match 46.5%; Score 719.2; DB:20; Length 2610;
Best Local Similarity 70.3%; Pred. No. 7.1e-185;
Matches 1025; Conservative 0; Mismatches 418; Indels 15; Gaps 4;
OY 5 gtcatcatgagcagatggttaccattgtgaaagaaggttgggtcagaagaaggagatat 64
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 193 ggcaccatgagcgagcgtgtcatgtggaagaggttgcctgcacaaacggaggagatc 252
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 65 ataaaactgtgagcccaagatactcttcttgaagaagatgctcatatagatat 124
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 253 atcaagacctgtgcgcacgcagctactctctcctcaagaatgattgacattatgtgtac 312
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 125 aagaagaacctcaagatggtattactcta---tccctcaaacatttcaattgca 181
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 313 aaggaagcgccgcagatggtggaacaaagtgaagctccctccaacattctctgtgagc 372
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 182 aaatgcagtttaattgaaaacgaagcagaagccaaacacattataatagatgtctc 241
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 373 cagtgcagctgattgaagcagcgagcgcccgcccaacattcatcatcgcgtcgtc 432
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 242 cagtgcagctgattgaagcagcatttcatgtatgactccgaaggaagaagaa 301
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 433 cagtgcagctgattgaagcagcatttcatgtatgactccgaaggaagaagaa 492
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 302 tggacagaagctatccagcgtgtagcaacagcagctgcagagcaagaagagaagaatg 361
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 493 tggacaacgcgcacatccacgtgtgctgacggcctcaagaagaagagaagagagatg 552
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 362 aattgtatccaacttcaaatgtatataatagagaagagaagatgagtcctctaca 421
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 553 gacttcggtcgtgcctcaccagtcagcaactcagcggcgtgaagatgagtgctccctg 612
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 422 accctc---ataaagaagaacaaatgatatgtattgtctatttgaactctatgtaaa 478
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 613 gccaaagcccaagcagcgtgtgacaaagagtttgatcctgtaagctgtcgtggcag 672
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 479 ggcactttggaaagtattttgtgtgagaagagcaagtgtgaanaatctatctatg 538
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 673 ggcactttcgcaaggtgattcctgtgtgaagagaagcacaagcgcgtctactacgcatg 732
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
OY 539 aagattctgaagaagaatcatatttgcacaagtgaaagtgcacacactctaaactgaa 598
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 733 aagatcccaagaagaagatcatcgtgcacaagcagcgtgtgcacacacactcaacgag 792
    ||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
```

QY	559	agcagagatataaagaacataagacatccctcttllaacatcccttgaaataatccctccag	658
Db	793	aaccggtctccctgcagaaactccagacacccctctccacagccctgcagtaactctccag	852
QY	659	acaaagaagcccttctgtcttctgtatgaaatagtttaatgagggcgagctgttttccat	718
Db	853	accacagacccgctctgtcttctgtcaatgaaatgaaacagggcgagagctgtcttccac	912
QY	719	ctgtcagagagagcggtgtctctctcaggaacccgacacgtttctatgtgtcagaataatgc	778
Db	913	ctgtcccgagaaacgtgtgtctctccagagacccggcccgcttcatgtgcgtctgagtgtg	972
QY	779	ctcgccttgagactcttcaactctcognaaaa---tctgtacccgtatctcaagtgtgag	835
Db	973	tcagccctgtgactcccgccctccgacatcgaaagaacggtgtgtlaaccggtactcaagcttgag	1032
QY	836	aatcctaatgtctgcacaagaatgccccatataaataatctacagatcttgcactctgcacaaga	895
Db	1033	aacctcatgtctgcacaagaacggcgacatataagatacagaactctcggtctgcacaagag	1092
QY	896	gggtatccacagatgtcagccacatcgaagaacatctctgtgcactccagaatatctgcacaa	955
Db	1093	gggtatccacagacgggtgcacacatgaagaaccttctgcgcacacctgcagtaacctgcgcacc	1152
QY	956	gagatgttaagaagaataatgactctgcgcgcgcagcagatagctgtgtgcgccttaaggttttc	1015
Db	1153	gaggtgtcgtgagagacaatgtgactacggccgctgtgcagtgactgtgtgtgtgtgtgtgtgtc	1212
QY	1016	atgtatgaataatgatagtgtgtgagagtttaaccttctatacaacagagacatgaaagaactttt	1079
Db	1213	atgtatcagagatgatagtgtgtcgtgtccgctctctatacaacagagacatgaaagaactttt	1272
QY	1076	gaatctaatatataagagagacatataattctccgcgaacactctcttcagatgcacaatca	1135
Db	1273	gaagctactctctcatgtgagggagatccgcgtctcccgcgacgctgtgtctccgaagccaaagctc	1332
QY	1136	ctgtcttccagggctctgtataaagaatcccaataaagcgtctgtgtgcagacagatgat	1195
Db	1333	ctgtcttccagggctctgtataaagaagcccccaagcagaggtctgtgtgtgtgtgtgtgtgtgt	1392
QY	1196	gcaaaagaataatgtgagacagatcttctctctctctgtgaataactgtgcagaagatgatagat	1255
Db	1393	gccaagaagatcctatgtgacagatctgcgtctcttctgcggatgtgtgtgtgcagacagtgtaag	1452
QY	1256	aaaaagctgttactctcttllaacctccaagtaaacatctgcagacagatctactagatatatt	1315
Db	1453	aagaagatgcagccacaccttcaagcccccaagtgcaagtgtagagatgcagacacaggtatatt	1512
QY	1316	gatgaagaatcttcagctcagactatatacaatacaacacactgtgaaataatgatgatagat	1375
Db	1513	gatgaagatgtctacggccacagatgatacatcaatcaacacacactgtgacaa-----gatgac	1566
QY	1376	gtatgtacgtgcataacatatgagagcgcgcgagattccctcaatttctactactgcga	1435
Db	1567	agactgtgagatgtgtgacaacgagagcgagagccccacacttctcccaagttctctactactgcgc	1626
QY	1436	agtgtgacgagataaagatc	1453
Db	1627	agcagacagcgctcgaagc	1644

RESULT	12
AA222190	
ID	AA222190 standard; DNA; 2610 BP.
XX	
AC	AA222190;
XX	
DT	26-NOV-1999 (first entry)
XX	
DE	Human Akt-1 DNA sequence.
XX	
KW	Human; Akt-1; antisense; diagnostic; therapeutic; prophylaxis; infection; inflammation; tumor formation; ss.

XX	Homo sapiens.
OS	
XX	
FH	Key
FT	Location/Qualifiers
CDS	199..1641
FF	/**tag= a
XX	
PM	US5958773-A.
XX	
PD	28-SEP-1999.
XX	
PF	17-DEC-1998; 98US-0212771.
XX	
PR	17-DEC-1998; 98US-0212771.
XX	
PA	(ISIS-) ISIS PHARM INC.
XX	
PI	Monia BP, Cowsert LM;
XX	
DR	WPI: 1999-561048/47.
DR	P-PDB: AATJ3599.
XX	
PT	Antisense compounds complementary to Akt-1 useful for, e.g.
PT	diagnostics, therapeutics and as research reagents -
XX	
PS	Example 13; Columns 43-46; 32pp; English.
XX	
CC	The invention provides antisense compounds of 8-30 nucleotides that
CC	inhibit the expression of human Akt-1. The antisense compounds may be
CC	used for diagnostics, therapeutics (for modulating the expression of
CC	Akt-1), prophylaxis (e.g. to prevent or delay infection, inflammation,
CC	or tumor formation), as research reagents (e.g. to distinguish between
CC	members of a biological pathway) and in kits. The present sequence
CC	represents the human Akt-1 DNA sequence (GenBank Accn number: M63167).
XX	
Sequence	2610 BP; 537 A; 752 C; 781 G; 540 T; 0 other:

Query Match	46.5%	Score 719.2;	DB 20;	Length 2610;
Best Local Similarity	70.3%;	Pred. No. 7.1e-185;		
Matches 1025;	Conservative	0;	Mismatches 418;	Indels 15;
			Gaps	4;
QY	5	gtcatcatgaacggaatggtacattgtgtgaagaagttgtgtgttcacagaaggggaatat	64	
Db	193	ggcacacagagcagcagatgycatgtgtgaagaggggttgygcacaaacgagggagatc	252	
QY	65	ataaaaacattggaagggccagaatacttccttlttgaagacagatggtctcatatagatat	124	
Db	253	atcaagacctgtgcyggccacgctactctctcctcctcaagaatgatgagaccttccttgcctc	312	
QY	125	aaagagaaacctcaagatgtgtgatttaactta--ttccctcaaacactlttcaatgtgca	181	
Db	313	aaggaagcggccgcaagatgtgtgaccaaagtgtagtctcccttcacaaactctctgttgcg	372	
QY	182	aaatgtccagtttaatgaaacaacagacgaccaaagccaaacatttaatacagatgtctc	241	
Db	373	cagtgccagcgtgataagagcagcgagcgcccgcccaacacctcatcatcgcgtctgc	432	
QY	242	cagtggaactatgttatagagagaacattcatgtatgattctccgaggaaggaagaa	301	
Db	433	cagtggaacctgttcatttcgaacgcaccttcattcattgtgagacctctgtgagagggagag	492	
QY	302	tggacagaagatcatccaagctgttagcagaacagactgscaggaagaagagagaggaatg	361	
Db	493	tggacaaacgcgaatccagactgtgtgtcgaagggctccaagaagcagaaggagagagagatg	552	
QY	362	aattgtatgccaacttccacaatttgtataatagagagagagagatgtgactctacata	421	
Db	553	gacttcggtgtcggtctcaaccacagtgacacatcccaaggggtctgaagagatgtgaggtgcctg	612	
QY	422	accacatc---ataaagaagaacaatgaaatgtatttgtactlttgaacctactagtgtaa	478	
Db	613	gccaagccaagacgcgcggttaccatagacaagatttgtatgttaccctaaactctctgcgca	672	

OY	479	ggaacatttgggaagtatttttggttcgaagaaagagcaagtgtgaaataactatgctatg	538
Db	673	ggacattctcgcaaggtgatactctgtgtgaagaaagaaagccacagcgctactatacgcata	732
OY	539	aagattctcgaaagaagagatcattatgtgcaaaagatgaagatgtgcacacacttaactaa	598
Db	733	aagattctcgaagaagagaaagcattcgtgtgcacaagaaagaaagatgtgccacaactcacag	792
OY	599	agcagagatataaagaacactatagacatcccttttaacatcccttgaataatcttcacag	658
Db	793	aaccgctgtctgcagaaactccacagacaccccttcctcaagccctgaagatcctttcacg	852
OY	659	acaaaagacogttgtgttttgtgtgatagtataatgttaatgtggtggcgagctgttttccat	718
Db	853	accacacgacccgctctgtctttgttcatgtgaatacgcacaacggggcgagctgttctcac	912
OY	719	ttgcgcgaagagcggtgtgtctctctgcagaccgcacagtttccatgtgtgcagaactgtc	778
Db	913	ctgtcccggtgaaaggtgtgttctctcgaagaccggtgcccgtctctatgtgcgtgtgaattgt	972
OY	779	tcgtgcttggaactatcatatccgcgaaga---ttgtgtaccgtatcatcaagtgttag	835
Db	973	tcagccctgtgactcgtgcactcgtgagaagaacgtgtgtacgcggaaactcaagctgttag	1032
OY	836	aacttaatgtctgagcaaaagtgtgcacataaaataacacagatlttvgactttgcaagaag	895
Db	1033	aactctatgtctgagcaaaagagcgacacatataaatacacaagacttcgggtgtgtgcaga	1092
OY	896	ggatatacagaatgtgacaccacatgaagaacattctgtgtgactcccaaatatctgtgcaca	955
Db	1093	gggtataagaagacgtgtgcacacatgaagaactcttltgtgtgcacactgtgaactgtgcccc	1155
OY	956	gaggtgtgaagaagaataatgactatgtgcgaagcagtagactgtgtgtgtggtccctaggggtgtc	1015
Db	1153	gaggtgtcgtgagagacaatgtactcctacgcgtgtgcagtagactgtgtgtgtgtggtcgtgtgtc	1212
OY	1016	atgttatataaagatgtgtgtgtgaggttaactcttcaacaacggagacacataagaacttttt	1075
Db	1213	atgtgaagagatgtatgt	1272
OY	1076	gaattaatatbaatvgaaagacatataattctctcgaacactctcttcagatgacaatac	1135
Db	1273	gagctcatctccatcatgtgaggtatcgcgtcttcgccgcagcgttgtgtccgaaggtccaa	1333
OY	1136	ttgtcttcaggtgtctctgtataaagagatccaataaagcgcctgtgtgtgtgtgtgtgtgtgt	1192
Db	1333	ttgtcttcaggtgtctctgtataaagagaccccaagaagagctgtgtgtgtgtgtgtgtgtgtgt	1392
OY	1196	gcaaaagaatatgagagacacagttcttctctcgtgagtaaacgtggaagaatgtatatgt	1255
Db	1393	gccaagaagatcatcagacagcgtcgtctcttctgtgcgtgtatcgtgtgtgtgtgtgtgtgtgt	1452
OY	1256	aaaaagcttggacctctctttaaactccaagtaacaactgtgagacagatactgatatltt	1315
Db	1453	aagaagctcagccacacttccaagccccaggtcaagtgtgagaactgtgacccaagatattt	1512
OY	1316	gatgaagaattatcagctcagactatacaataacacacactgtgaaataatatagtatgat	1377
Db	1513	gatgaagaattatcagctcagactgtatcatcatcaacacacactgtgacaa-----gatgac	1566
OY	1376	ggtatgacctcagagacaatgtgagagcggtgcgcatcttccatcaatttttctcactgtga	1433
Db	1567	agcatgtgaggtgtgtgtgacagcgagcgcaagccccactctccccaagttctcctaactcgcc	1626
OY	1436	agttgacgagataaagtc 1453	
Db	1627	agcagcagcgctgtgagtc 1644	

Query Match	Best Local Similarity	Matches 1025;	Conservative	Score 719.2;	DB 21;	Length 2610;
46.5%;	70.3%;	0;	Mismatches 418;	Indels 15;	Gaps 4;	
5	gtcatcatgaagatgttaccatttgaagaagtttggttcacgaagggaatat	64				
193	ggcaccatgaaggaagtggtctatttgaagaaggttggctcgcaacaacgaaggagatc	252				
65	ataaaaactgtgaaggccaagatctcttcttgaagaagaatggtcatcataagatat	124				
253	atcaagacctggcggccaagctactctctccccaagaatgatgagacctcatggtac	312				
125	aaaggaaacctccaagatgtgattactcta---tccctccaacaacttttcagtga	181				
313	aaggaaggccgacgaatgttgcaacaagctggaggtccctccaacaactctctgtg	372				
182	aatccgagttatataaacaagacgaacgaagccaacaacattatatacatagatgtc	241				

Db 373 cagtcgacgtgtatgaagacgagcgccccgcccaacattcatccgctcgtc 432
 QY 242 cagtcgactactgttatagagagaacattcatgttagatactccaagaggaagaa 301
 Db 433 cagtcgacacactgttcatcgaacgaccttccattgttagagactcctcagcgaggaag 492
 QY 302 tggacgaagaacttccaaggtgttagcagaagaactcgaagcagaagaagagagaatg 361
 Db 493 tggacacacgcctcatcgaactgtgtcgaagcgctccaagaagcagagagagagagatg 552
 QY 362 aattgtatccaactccaacttgaataatagagaagaagaagatggtgcctaca 421
 Db 553 gacttcggtcgcggtcccaaccagtgacaactcgaagcgaggaagaggtgtccctg 612
 QY 422 acccacc--ataaagaagaacatgaatgtattgtgactattgaactaggtaaa 478
 Db 613 gccaaagcccaagcaccgcggtgacacatgaagagtttgaagactgaagctgtccggaag 672
 QY 479 ggcacttttgggaagaattattgtgttcgagagaaggaagcagtggaataactgtcatg 538
 Db 673 ggcactttcgcgaaggtgtatcctcgtgaaggaaggaagcagaagcgctactagcactg 732
 QY 539 aagatctgaagaagaagatcatattatgtcgaagaagtggaagtggaacactcaactgaa 598
 Db 733 aagatcctcaagaagaagatcatcgtgcgaagaagcagagtggtgccacacactaccagag 792
 QY 599 agcagaatlaaagaacactagacatcccttttaacatcctctgaataatcctccag 658
 Db 793 aaccgctcgtcgaagactcccaagcacccttccctcactcgaagccttgaaactttccag 852
 QY 659 acaaaagacggtttgtgttttggatggaatagttaatgggggcagctgtttccat 718
 Db 853 acccaagaccgcctcgtcgttgcgtatgagtaagcaagcggtgcagctgtctctccac 912
 QY 719 tgcgcgaagagcggtgtgtcctcctgaggaagcgacacagtttccatgtcaagaattgtc 778
 Db 913 ctgtcccggaagcgtgtgttcccggaagcgcccgcttctaagtcgtcgtgagatctgtc 972
 QY 779 tctgccttggactatcatcttcgaaaga--ttgtgtaacgtgtatctcaagtgtgag 835
 Db 973 tcagcccttgactaccctgacactcgaagaacggtgtgttacgggaacctcaagctcgag 1032
 QY 836 aatctaattcttgacaagaatgcccacataaaatlaacagatttggactttgcaagaag 895
 Db 1033 aacctcaatgctgacaagaacggtgcacatlaagatcacagacttcgggtgtgcaagag 1092
 QY 896 gggatcacagatgcagcccaactgaagacattcgtgtgcacacccaataatctgacaca 955
 Db 1093 gggatcaagaagcggtgcacacactgaagacatttgcgcgacacactgagtaacctggccc 1152
 QY 956 gagggtgttagaagataatgactatgacgagtagactgtgtgggacctaaagggtgttc 1015
 Db 1153 gagggtgttagaagataatgactatgacgagtagactgtgtgggacctaaagggtgttc 1212
 QY 1016 agtgtatgaatgt 1075
 Db 1213 agtgtatgaatgt 1272
 QY 1076 gaattatataatgaagacataatattcctcgaacactcctcttcaacataaataa 1135
 Db 1273 gaggcatcctcatatggagagagatcgcgttcccgacagctgtgtcccgaggaagcc 1332
 QY 1136 tgcgttcaagggctcttataaagaatccaataaagcctgtgtgtgtgtgtgtgtgtgt 1195
 Db 1333 tgcgttcaagggctcttataaagaatccaataaagcctgtgtgtgtgtgtgtgtgtgt 1392
 QY 1196 gcaaaagaataatgaagacaggtttcttctgtgtgtgtgtgtgtgtgtgtgtgtgtgt 1255
 Db 1393 gccaaagagatcatgacagatcgtcttctgtgtgtgtgtgtgtgtgtgtgtgtgtgt 1452
 QY 1256 aaaaagctgtacccctttaaaccctaagataacatctgaagacagatcatcatattt 1315
 Db 1453 aagaagctcagcccaaccttcaagcccaaggtcaacgtcgaagacacaggtattt 1512

QY 1316 gatgaagaatttcaacgtcagactatcacataacacacactgaaaaatagtatgagat 1375
 Db 1513 gatgagagatctacacgcccagatgacatcacacacactgtacaaa-----gatgac 1566
 QY 1376 ggtatgtactgtcatgacaatgagagcggtcgcatttccctcaatttctactctgca 1435
 Db 1567 agcatgtgagtgtgtgacagcgagcgagcccaacttccccaatttctactctgcgc 1626
 QY 1436 agtgcagcaggaataagtc 1453
 Db 1627 agcagcagcggtcgtgagc 1644

RESULT 14

AAV71037

ID AAV71037 standard; cDNA: 2181 BP.

XX AAV71037;

XX 08-FEB-1999 (first entry)

XX PKB-green fluorescent protein fusion product.

XX Human; PKB gene; fusion protein; green fluorescent protein; GFP;

XX intracellular signaling; chimera; ss.

XX Chimeric - Homo sapiens.

XX

XX Key Location/Qualifiers

FH CDS 1..2181

FT FT /*tag= a

XX MO9845704-A2.

XX 15-OCT-1998.

XX 07-APR-1998; 98MO-DK00145.

XX 07-APR-1997; 97DK-0000392.

XX (NOVO) NOVO-NORDISK AS.

XX Kasper A, Petersen Bjorn S, Scudder K, Thastrup O;

XX Tullin S;

XX WPI: 1998-594491/50.

XX P-PSDB; AAM85022.

Determining effect on signaling pathways in live cells from
 redistribution of luminophores - specifically fusions of green
 fluorescent protein with a signalling component, and new apparatus,
 particularly for identifying toxins and potential therapeutic agents
 Claim 63: Pages 154-158; 326pp; English.

The present sequence encodes a human PKB-green fluorescent
 protein fusion product. The fusion protein is used in an assay
 that exemplifies the invention. The specification describes how
 quantitative information about the influence of a molecule on a cellular
 response is obtained by recording the variation, caused by the molecule,
 on mechanically intact living cells, in the spatially distributed light
 emitted from a luminophore present in the cells. The variation in light
 emission is processed to provide information that correlates spatial
 distribution to the degree of the molecule. The method is used to
 identify agents that (in)directly affect intracellular signaling,
 especially to screen for potential therapeutic agents or toxins, and
 to identify new drug targets.

Sequence 2181 BP; 500 A; 672 C; 644 G; 365 T; 0 other:

Query Match 46.3%; Score 716.4; DB 19; Length 2181;
 Best Local Similarity 70.7%; Pred. No. 3.8e-184;
 Matches 1015; Conservative 0; Mismatches 406; Indels 15; Gaps 4;

```

OY 11 atgagcgatgtaccattgtgaagaaggltgggttcagaagaaggaggaatatataaa 70
Db 1 atgagcgatgtaccattgtgaagaaggltgggttcagaagaaggaggaatatataaa 60
OY 71 aactgagcgcaagatctctcttctgaagacagatggtctctatagaatataaagg 130
Db 61 accgtgcgcccagctactctctctcaagatgtagcacttattgtctacaaagg 120
OY 131 aaactcaagaatgtgattactcta---tccctcaaacatttccatgtgcaaatgc 187
Db 121 cggccgcagagatgttgagcaacgttgaaggtccctccaaacttctctgtgcgcagtgc 180
OY 188 cagttatgaataacacagacgaccaaagccaaacattatataatcagatgtctcagttg 247
Db 181 cagctgatgaagcagagcgagcgcccgcccaacacttcatctcgcgtcgcagtgc 240
OY 248 actactgttatagagaaacatttcatgtatgatactccagaagaagaaggaaatgga 307
Db 241 accactgtcatcgaacgcctctccatctgtagactcctgagagcgaggagatgga 300
OY 308 gaagctatccagcgtgtaacagacagactgcagagcaagaagaagagagaatgtatgt 367
Db 301 accgcacatccagactgtgtcgtcagcgtcccaagaagcaggaagaagaagatgtgacttc 360
OY 368 agtccaacttcaaaaattgataatagagaagaagaatgagatgtcctcaaacccat 427
Db 361 cgtgtcgtgtcaccagctgacacatccagcggtgtagaagatgaggtgtccctgcgaag 420
OY 428 c---ataaagaagaagaatgatatatttgaacttattgaactctactgtaaggcact 484
Db 421 cccaagcagcggtgtaaccaatgagaggttgcgtacacctgagctcgtgcgaaggcact 480
OY 485 ttgggaaagtatttgggttcgagagaagcaagtggaaataactatctctatgaagatt 544
Db 481 ttccgcaaggtgatctcctgttgaagaagaagccacagcgctactactacgccttgaagattc 540
OY 545 ctgaaagaagaagtcattatttgcacaaagtgaagtggcacaactctaaactgaaagcaga 604
Db 541 ctcaagaagaagtcaltcgtgcgaagcagaggtgcgccacacactcaccgagaacgcg 600
OY 605 gftaataagaagaactagacatccctttaaacaatccctgaatattcctccagacaaa 664
Db 601 gtccgtcagaactcagacacccctctcctcagccttgaagtaacttctccagaccac 660
OY 665 gaccgttgggttgggttgaatgaatgaatgttaatggcggaagctgttttccatttgcg 724
Db 661 gaccgctctcgtcttgcatagtgatacgcaagcgaggcgagctgttctccaccgtgcc 720
OY 725 agaagcggtgtctctcgaagacgcgacagcttctctatgtgagcagaatgtctctgcc 784
Db 721 cgggagacgtgttctcgcagagccggcgccctctatagcgcgagatgtgtgcagcc 780
OY 785 ttggaactctacattccggaaga---tgtgtacgcgtgatactcaaglttgagaactcta 841
Db 781 ctggaactctcgtcactcgaagaagaacgtgtgtacgcggagactcaagctgagaacctc 840
OY 842 atgctggaacaagaatgagccacataaaatttagagaatttggacttggaaaagaaggatc 901
Db 841 atgctggaacaagaatgagccacataaaatttagagaacttgcgagatggaaggagacc 900
OY 902 acagaatgacacacacatgaagacatctgttgcaactcagaatatctgcacacaagatg 961
Db 901 aagagcggtgtccacacatgaagacacttggcgacacactgagtaactgtgccccgaggtg 960
OY 962 ttagaagaataatgatacgccgagcagatgaactgtgtgggctcgagggtgtgtcatgtat 1021
Db 961 ctgagagcaatgatactgagccgtgtcagltgagctgtgtgggtctggcggtgtgtcttgc 1020
OY 1022 gaatgatgtgtggaggttacccttctacaaaccaggaacatgagaacttttgaatta 1081

```

```

Db 1021 ggagatggtgtggtgcgtcgtccctctacaaaccaggaacatgagaacttttgaagtc 1080
OY 1082 atattaatggaagaacataaattctctcgaacactctctcagatgacaatcatgtctt 1141
Db 1081 atcccatgtgaggaatccgcttccgcgcagcgtgtgtccgagcgcaagtcctgtctt 1140
OY 1142 tcaaggctcttgataaagatccaataaagcacttgggtgtggagcagatgatacaaa 1201
Db 1141 tcaaggctcttgataaagatccaataaagcagaggtctggcggtgtccagatgcgcag 1200
OY 1202 gaattatagaacacagttctctctgtgagtaaaactggcaagatgatalatataaaag 1261
Db 1201 ggagatcatgacatcgtctcttcttcgcgtatcgtgtgacagacgtgtacagagaag 1260
OY 1262 ctgtgactcctctttaaactcaagtaacatctgagacagataatgataattgtgaa 1321
Db 1261 ctcaagcccaactcaagccccaggttcaagctgtgagactgacacacaggtattgtag 1320
OY 1322 gaatttacagctcagactattacataaacacacttgaaaaatatgagatgtatg 1381
Db 1321 gatttcaagcggccagatgatacacaatcacacacttgacaa-----gattacagcatg 1374
OY 1382 gactgcattgacaatgagagcgcgccgacttccctcaatttctactctgcaag 1437
Db 1375 gagtgtgtgtgacagagagcagcgcccaacttcccccagttctctactcgtgcag 1430

```

RESULT 15
 AAT71252
 ID AAT71252 standard; DNA; 1599 BP.
 XX
 AC AAT71252;
 DT 30-MAR-1998 (first entry)
 XX
 DE Mouse Akt-2 cognate transgene.
 KW Akt-2; cognate transgene; mouse; serine-threonine kinase; proto-oncogene;
 KW cellular immunogen; cancer; self-determinant immunoreactivity; lymphoma;
 KW cancer vaccination; breast carcinoma; colon carcinoma; immunotherapy; ss.
 OS Mus musculus.
 XX
 PN W09725860-A1.
 XX
 PD 24-JUL-1997.
 XX
 PF 13-JAN-1997; 97WO-US00582..
 XX
 PR 19-JAN-1996; 96US-0010262.
 XX
 PA (UNIV.) UNIV ALLEGHENY HEALTH SCI.
 XX
 PI England JM, Halpern MS.
 XX
 DR WPI: 1997-384993/35.
 XX
 PT Proto-oncogene immunogen - used in vaccine for the prevention and
 XX treatment of cancer
 PS Disclosure: Page 55-56; 81pp; English.
 XX
 CC This sequence represents the mouse Akt-2 cognate transgene (CTG).
 CC Deletion of amino acids 148-234 of the encoded protein render the CTG
 CC non-transforming. Akt-2 is a serine-threonine kinase. This sequence can
 CC be used in the cellular immunogen of the invention. The cellular
 CC immunogen of the invention is for immunising against the product of a
 CC target proto-oncogene, over-expression of which is associated with
 CC cancer, comprises host cells transfected with a construct containing at
 CC least one transgene related to the proto-oncogene and driven by a strong
 CC promoter. The product of the transgene induces immunoreactivity to host
 CC self-determinants on the product of proto-oncogene. The cellular

CC Immunogens are used for protective vaccination against cancer (e.g.,
 CC carcinoma of breast or colon, or various lymphomas) and for immunotherapy
 CC of cancer. Use of the immunogen eliminates the need to isolate
 CC immunogenic, HLA host-matched peptides. The method is not based on immune
 CC recognition of a determinant defined by a cancer-specific mutation and
 CC generates a systemic (anti-metastatic) response.

XX Sequence 1599 BP; 351 A; 487 C; 457 G; 304 T; 0 other;

Query Match 42.5%; Score 658.2; DB 18; Length 1599;
 Best Local Similarity 67.7%; Pred. No. 1.9e-168;
 Matches 988; Conservative 0; Mismatches 453; Indels 18; Gaps 4;

QY 5 gtcataatgagcgtttccattgtgaagaaggttggtgttcagaaggaggagatat 64
 DB 82 gccacattgaatgaggtgtctgtccatcaagaaggtgtgtccacaagcgtgtgtat 141
 QY 65 ataaaaactgagggccaagatatcttcctttgaaagacagatggtccattcatagatat 124
 DB 142 atcaagacctggagggccacagtgtaacttcctgtctgaagaagcgagcgtcccttcattgtgtac 201
 QY 125 aagaagaacctaaagatggttttaaccttacc--tcaacaactttcagtgtgca 181
 DB 202 aaggaagagcccgagccctgtatcagactctaccccttaacaacctctcgttagca 261
 QY 182 aatgacgtttaatgaagaagacgacgaacgaacccaacattatcatcagatcttc 241
 DB 262 gaatgcacgtctgaatgaagacgagagccgacccaacctgttccatcagcgtcctg 321
 QY 242 cagtgtactactgttataagagaacattcatgtatgatatccaaaggaagaaagaga 301
 DB 322 cagtgcaccacgtatcagagaggtaccttccacgttgatctccagaagagagggag 381
 QY 302 tgaacgaagacttccagctgtgacagagaact-----gcagaaggaagaagagag 355
 DB 382 tggatgcgggccaatcagatgtgcgaacagcctcaagaagcggccccaagcgagagac 441
 QY 356 agaatgaattgtatgcacacttccaaattgataatataagagaaggaagatgtgtcc 415
 DB 442 cccatgtactacaaggtgtgtctcccaatgtactctccacgactgaagagaagtgagtg 501
 QY 416 tctacaacctat--cataaagaagaacaaatgaatgatttgaactatttgaactacta 472
 DB 502 gcggtcagcaagcagcgggtlaaagtcacatgaatgacttgcatactcaactcctt 561
 QY 473 ggtaaaggaacttttgggaagtatttgggtcgcagagaagcgaagtgaataactat 532
 DB 562 ggtcaagggaaccttggcaaaagtcacccgtgtggtggaaggaagccacttgcgtactac 621
 QY 533 gctatgaagatcttgaagaagaagatcatatgtcaagaagatgaagtggcacactcta 592
 DB 622 gtcattgaagatccttggaagaagagatcatatgtcgaagatgaagtgcgtcacagtc 681
 QY 593 actgaagcagagatlaaagaacactagaatcccttttaacatcccttgaatatcc 652
 DB 682 accgaagagccgggttccctccgaacacacagcaccgttccctcactgctgaagtatgcc 741
 QY 653 ttccagaacaagaacccgttgtgttttggatggaatatgtatggggcgagcgtgtt 712
 DB 742 ttccagaaccacgacccgtgtgttggatggaatatgtcacaagcgggtgtgagcgttcc 801
 QY 713 ttccattgtcagagagcgggtgtctctgagacgcgcacacgtttctctatgtgcagaa 772
 DB 802 ttccacctgtccgggagcgtgtctctcaagaagagcgggcccgttttattgtgcagag 861
 QY 773 attgtcttgcttgatctacatltccggaagatgtgtacgtgtatctcaagtgtg 832
 DB 862 attgtcttgcttgatctacatltccggaagatgtgtacgtgtatctcaagtgtg 921
 QY 833 gagaatctaagtgtgacaaagatggtccataaaatcacagaatttggacttgcaaa 892
 DB 922 gaaaacctatgtgtgacaaagatggtccataaagatcatgtacttggcctctgtc 981

QY 893 gaaggatcacagatgtcacgaccacatgaagaacattctgtggtcactccagatatcgtgca 952
 DB 982 gagggatcatgtgacggggccacacagaaaccttctgtgggaccccgagatcacctggcgc 1041
 QY 953 ccgaaggtgttgaagaatatactactatggccgagcagatgagatggtgtgggcttaggggtc 1012
 DB 1042 ccggaaggtgtgtgagaacaatgactatgtccggcgccgtgtgactgtgtgggggtctgtgtg 1101
 QY 1013 gtcatgtatgaatgtatgtgtgtggaggttaacctttctacacaccagagacatgagaacct 1072
 DB 1102 gtcatgtatgaatgtatgtgtgtggaggttaacctttctacacaccagagacatgagaacct 1161
 QY 1073 ttggaatataatlaaagaagaacatttaattctctcgagacactctcttcaagatgcaaaa 1132
 DB 1162 ttggaatataatlaaagaagaacatttaattctctcgagacactctcttcaagatgcaaaa 1221
 QY 1133 tcatgtcttcagggcgtcttgaataaaggaatccaaataacgccttgtgtgagagaccagat 1192
 DB 1222 tccctgtctgtggcgtgtgttgaagaagcccccaagcagaggtgtgtgtggggcccgagc 1281
 QY 1193 gatgcagaagaatataatgagacagttctctctctctgtgaagtaactgtgcaagatgtatc 1252
 DB 1282 gatgcagaagaatataatgagacagttctctctctctgtgaagtaactgtgcaagatgtatc 1341
 QY 1253 gataaaagcctgttactctctttaaactcaagtaacatctgagacagatactagatat 1312
 DB 1342 cagaagaagcctctgtccacaccttcaacctcagtgatcgtccgaaggtgtgcacaaggtac 1401
 QY 1313 ttgataagaagaatltacaagctcagactatataacacacacacttgaanaataatgtagag 1372
 DB 1402 ttgataagaagaatltacaagctcagactatataacacacacacttgaanaataatgtagag 1455
 QY 1373 gatgtatgactgtcagatggaacatggaagggcgagcattccctcactatcttccactact 1432
 DB 1456 gaagcctgtgtgtacttgaagctgtgacagcgagaccacttcccaagttctcctactcg 1515
 QY 1433 gcaagtgtgacgaagaataag 1451
 DB 1516 gccagatcgcgagtgag 1534

Search completed: March 8, 2002, 21:47:49
 Job time: 3450 sec

Mon Mar 11 07:46:12 2002

us-09-851-670-1.rng

Page 19

THIS PAGE BLANK (USPTO)